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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/568,463

05/23/2006

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03/02/2010

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EXAMINER

YOO, REGINA M

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

03/02/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/568,463	Applicant(s) HAMMOND ET AL.	
	Examiner REGINA YOO	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

FINAL ACTION

Response to Amendment

The amendment filed on 9/14/2009 has been received and claims 32-48 are pending.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 32-34, 36-38, 40-44 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horikiri (JP 2001-087370) in view of Kvietok (20040033171).

As to Claims 32-34, 36-37, 42 and 46-48, Horikiri ('370) discloses an air treatment device (1) and method comprising:

providing an air treatment device (1) comprised of:

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- a gas or vapor detector comprising a plurality of gas or vapor sensors (6a, 6b) and at least two sensor (6a, 6b; which is capable of sensing the same gas or vapor, especially when an odor is comprised of both an acidic and alkaline components – see paragraph [0031] of English machine translation);
- the gas or vapor detector comprises means to detect a threshold level or concentration of a gas or vapor (see English machine translation [0010]-[0011]);
- a means (7 and 8, as well as the shelf that the containers 8 and solenoid 11 sit on) to mount a source of air treatment agent (10a, 10b) to the device (1) comprising means to connect a receptacle (8) to the device (1) where the receptacle comprises the air treatment agents (10a, 10b) (see Drawing 1);
- a means (7, 9, 11, 12) to expel a portion of air treatment agent upon detection of a gas or vapor by the detector (see entire document, particularly [0023] of the English machine translation); and
- a process unit (13) which receives signals from at least both sensors (6a, 6b) in order to cause a portion of airborne treatment agent (10a, 10b) to be expelled (see entire document, particularly paragraphs [0023] and [0034], where the control panel 13 is deemed to be a processor as it possesses ability to actuate solenoid 11 and member 12 for expelling the air treatment agent based on the threshold level set and comparing this value with readings from the sensors 6a/6b);

detecting an airborne agent in an airspace (see paragraphs [0024]-[0028]),

activating expulsion of an air treatment agent into the airspace in response to said detection (see paragraphs [0025]-[0028]), and

expelling a single portion of agent in response to detection of an airborne agent (see paragraphs [0025] and [0027]),

wherein expulsion of an agent comprises a continuous stream of agent for a defined period of time (see Drawing 1(b) and paragraphs [0025] and [0027]).

Horikiri ('370) does not appear to specifically teach that the air treatment device comprises a person sensor so as to detect a person within the range of the person sensor or that the means to expel a portion of air treatment agent comprises a heater element where the heater element is actuated upon detection of the airborne agent by the airborne agent detector and detection of a person by the person sensor in order to increase the emanation of the air treatment agent and located proximate to a diffusion wick.

It was known in the art at the time of invention to provide a person sensor and a heater element as the means to expel a portion of air treatment agent in an air treatment device. Kvietok ('171) discloses an air treatment device (20) comprised of means to mount a source (28, 30 with wick 38) of air treatment agent (32, 34) to the device (20) (see Figures 6-8) and means to expel a portion of air treatment agent (32, 34) comprises a heater element (40, 42) where the heater element (40, 42) is actuated upon detection of a stimulus by a detector (claims 11 and 27) such as a person detectors (i.e. motion detector; see claims 12 and 28, and p. 6 [0056]) and is located proximate to a diffusion wick (38) (see Figures 6-8), and a processor unit (see p.5

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[0046]-[0049] and p.6 [0054]) which causes a portion of airborne treatment agent to be expelled after receiving signals from the detector (claims 11 and 27) in order to emanate the air treatment agent into the atmosphere (see entire document, particularly p.5 [0044]).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide a person sensor and a heater element as the means for expelling an air treatment agent within a source of air treatment agent after receiving a signal from a detector in the device of Horikiri in order to provide a portion of air treatment agent to the atmosphere when a person is present as shown by Kvietok and it would have been obvious to one skilled in this art to incorporate the two detection devices/methods into a single device in order to emit the air treatment agent when upon detection of both the airborne agent and a person in the vicinity of the device so as to ensure that the air treatment occurs only when a person is present in an area contaminated by an airborne agent to more economically treat the air.

As to Claim 38, Horikiri ('370) discloses an air treatment device (1) where the detector includes three or more sensors (see last two lines of paragraph [0034], which are capable of sensing non-target gas or vapor and both target and non-target gas or vapor; see also MPEP § 2114 which states that apparatus claims must be structurally distinguishable from the prior art and that manner of operating the device does not differentiate apparatus claim from the prior art if the prior art apparatus teaches all the structural limitation of the claim) and the processor (13) present within the device is

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capable of preventing the expulsion of the air treatment agent when the second sensor detects a signal completely or until the first sensor gives a signal at a higher threshold value than usual.

As to Claim 40, Horikiri ('370) discloses an air treatment device where the gas or vapor detector comprises a metal oxide sensor (see paragraphs [0018]-[0019]).

As to Claim 41, Horikiri ('370) discloses an air treatment device (1) wherein the air treatment expulsion means comprises a pump or aerosol (7a, 7b, 9) (see Drawing 1).

As to Claims 43-44, Horikiri ('370) discloses an air treatment device (1) wherein the air treatment agent (10a, 10b) comprises an agent comprises a deodorant that is capable of masking, neutralizing or retarding malodor or unwanted odor (see entire document, particularly paragraphs [0008], [0010]-[0013] and [0021]).

Thus, Claims 32-34, 36-38, 40-44 and 46-48 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Horikiri ('370) and Kvietok ('171).

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4. Claims 32-34, 37-38, 40-44 and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horikiri (JP 2001-087370) in view of Barradas (5735918).

As to Claims 32-34, 37, 42 and 46-48, Horikiri ('370) discloses an air treatment device (1) and method comprising:

providing an air treatment device (1) comprised of:

- a gas or vapor detector comprising a plurality of gas or vapor sensors (6a, 6b) and at least two sensor (6a, 6b; which is capable of sensing the same gas or vapor, especially when an odor is comprised of both an acidic and alkaline components – see paragraph [0031] of English machine translation);
- the gas or vapor detector comprises means to detect a threshold level or concentration of a gas or vapor (see English machine translation [0010]-[0011]);
- a means (7 and 8, as well as the shelf that the containers 8 and solenoid 11 sit on) to mount a source of air treatment agent (10a, 10b) to the device (1) comprising means to connect a receptacle (8) to the device (1) where the receptacle comprises the air treatment agents (10a, 10b) (see Drawing 1);
- a means (7, 9, 11, 12) to expel a portion of air treatment agent upon detection of a gas or vapor by the detector (see entire document, particularly [0023] of the English machine translation); and
- a process unit (13) which receives signals from at least both sensors (6a, 6b) in order to cause a portion of airborne treatment agent (10a, 10b) to be expelled (see entire document, particularly paragraphs [0023] and [0034],

where the control panel 13 is deemed to be a processor as it possesses ability to actuate solenoid 11 and member 12 for expelling the air treatment agent based on the threshold level set and comparing this value with readings from the sensors 6a/6b);

detecting an airborne agent in an airspace (see paragraphs [0024]-[0028]),

activating expulsion of an air treatment agent into the airspace in response to said detection (see paragraphs [0025]-[0028]), and

expelling a single portion of agent in response to detection of an airborne agent (see paragraphs [0025] and [0027]),

wherein expulsion of an agent comprises a continuous stream of agent for a defined period of time (see Drawing 1(b) and paragraphs [0025] and [0027]).

Horikiri ('370) does not appear to specifically teach that the air treatment device comprises a person sensor where the processor unit allows airborne treatment agent to be expelled in response to a signal from one or more of the sensors, only when the person detector gives a signal and for an interval thereafter.

It was well known in the art at the time of invention to provide a person detector in an air treatment device. Barradas ('918) exemplifies an air treatment device (10) which includes a person detector (22) which gives a signal and for an interval thereafter to cause airborne treatment agent to be expelled in response to such signal in order to automatically operate the device so that the scent is released from the device into the room only when a person enters/is present in the room or in the vicinity of the device (see entire document, particularly Col. 1 lines 4-8 and 52-59 and Col. 3 lines 26-36).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide a person detector in the device of Horikiri in order to provide the air treatment agent when a person is present in the vicinity of the device as exemplified by Barradas so as to ensure that the air treatment occurs only when a person is present in an area contaminated by an airborne agent to more efficiently and economically treat the air by using the air treatment agent only when necessary (i.e. only when airborne agent would be detectable).

As to Claim 38, Horikiri ('370) discloses an air treatment device (1) where the detector includes three or more sensors (see last two lines of paragraph [0034], which are capable of sensing non-target gas or vapor and both target and non-target gas or vapor; see also MPEP § 2114 which states that apparatus claims must be structurally distinguishable from the prior art and that manner of operating the device does not differentiate apparatus claim from the prior art if the prior art apparatus teaches all the structural limitation of the claim) and the processor (13) present within the device is capable of preventing the expulsion of the air treatment agent when the second sensor detects a signal completely or until the first sensor gives a signal at a higher threshold value than usual.

As to Claim 40, Horikiri ('370) discloses an air treatment device where the gas or vapor detector comprises a metal oxide sensor (see paragraphs [0018]-[0019]).

As to Claim 41, Horikiri ('370) discloses an air treatment device (1) wherein the air treatment expulsion means comprises a pump or aerosol (7a, 7b, 9) (see Drawing 1).

As to Claims 43-44, Horikiri ('370) discloses an air treatment device (1) wherein the air treatment agent (10a, 10b) comprises an agent comprises a deodorant that is capable of masking, neutralizing or retarding malodor or unwanted odor (see entire document, particularly paragraphs [0008], [0010]-[0013] and [0021]).

Thus, Claims 32-34, 37-38, 40-44 and 46-48 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Horikiri ('370) and Barradas ('918).

5. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horikiri (JP 2001-087370) in view of Kvietok (20040033171) or Barradas (5735918) as applied to claim 32 above, and further in view of Dearling (4084732) or Kuhn (5364027).

Horikiri ('370) and Kvietok ('171) or Barradas ('918) are relied upon for disclosure described in the rejection of claim 32 under 35 U.S.C. 103(a).

While Horikiri ('370) discloses an air treatment device which provides an active dispensing device for the mounted source of air treatment agent, neither Horikiri ('370) or Kvietok ('171) or Barradas ('918) appears to specifically teach that the mounted source of air treatment agent is also passively emanated from the device.

It was well known in the art at the time of invention to both actively and passively provides an air treatment agent from one device. Dearling ('732) exemplifies an air

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treatment device (10) where a source of air treatment agent (12) (see Col. 2 lines 26-31) is actively (by spraying the agent out into the air through 52) and passively emanating (by spraying onto 42 where the air treatment agent is absorbed or adsorbed and in turn imparted to the carrier segment 40) in order to provide the air treatment agent immediately as well as to provide the agent over a longer period of time (see Col. 4 lines 8-29). Kuhn ('027) also exemplifies that an air treatment agent dispenser device (1) where the air treatment agent (within 2; see Col. 2 lines 22-23) is both actively provided (through the spray nozzle 8) and passively (through the wick 4, 10, 16) emanated in order to combine continuous and instant operation of a dispenser of an active material to provide the active material to the atmosphere.

It would have been obvious to one of ordinary skill in this art at the time of invention to provide means so that the air treatment agent of Horikiri is both actively and passively provided into the atmosphere in order to provide the ability to both enhance the atmosphere with a burst of dispersible material for immediate effect and to provide a longer lasting, continuous, evaporative effect as exemplified by Dearling or Kuhn.

Thus, Claim 35 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Horikiri ('370), Kvietok ('171) or Barradas ('918) and Dearling ('732) or Kuhn ('027).

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6. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horikiri (JP 2001-087370) in view of Kvietok (20040033171) or Barradas (5735918) as applied to claim 32 above, and further in view of Sunshine (6418783).

Horikiri ('370) and Kvietok ('171) or Barradas ('918) are relied upon for disclosure described in the rejection of claim 32 under 35 U.S.C. 103(a).

While Horikiri ('370) discloses an air treatment device where the gas or vapor detector comprises a metal oxide sensor, neither Horikiri ('370) nor Kvietok ('171) or Barradas ('918) appears to specifically teach that the detector is comprised of a conducting polymer sensor.

It was well known in the art at the time of invention to utilize a conducting polymer sensor as a gas or vapor detector. Sunshine ('783) exemplifies a gas or vapor detector (100) wherein the detector (100) is comprised of a conducting polymer sensor in order to detect/sense the presence and concentration of a wide variety of specified vapors (see entire document, particularly Abstract, Col. 5 lines 52-61, Col. 10 lines 34-49, and Col. 11 lines 5-11). It would have been obvious to one of ordinary skill in this art at the time of invention to provide a conducting polymer sensor in the detector of Horikiri as an alternate sensor means in order to sense/detect gas or vapor as exemplified by Sunshine.

Thus, Claim 39 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Horikiri ('370), Kvietok ('171) or Barradas ('918) and Sunshine ('783).

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7. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Horikiri (JP 2001-087370) in view of Kvietok (20040033171) or Barradas (5735918) as applied to claim 32 above, and further in view of Chiao (6602475).

Horikiri ('370) and Kvietok ('171) or Barradas ('918) are relied upon for disclosure described in the rejection of claim 32 under 35 U.S.C. 103(a).

Neither Horikiri ('370) or Kvietok ('171) or Barradas ('918) appears to teach that the person sensor is in the form of an infra-red sensor or a passive infra-red sensor.

It was well known in the art at the time of invention that a person sensor is in the form of an infrared sensor. Chiao ('475) exemplifies that a person sensor is an infrared sensor in order to detect humans close to a device so as to emit an air treatment agent (see Col. 11 lines 12-17). It would have been obvious to one of ordinary skill in this art at the time of invention to provide a person sensor in the form of an infrared sensor in the air treatment device of Horikiri as modified by Kvietok or Barradas in order to activate the air treatment device when the presence of a person is detected nearby as exemplified by Chiao.

Thus, Claim 45 would have been obvious within the meaning of 35 U.S.C. 103(a) over the combined teachings of Horikiri ('370), Kvietok ('171) or Barradas ('918) and Chiao ('475).

Response to Arguments

8. Applicant's arguments filed 9/14/2009 have been fully considered but they are not persuasive.

Specifically, as to Applicant's arguments that the neither Kvietok nor Barradas in combination with JP 370 teaches "a device that expels airborne treatment agent every time" "when a processor unit of the device receives a signal from BOTH the airborne agent sensor AND the person sensor" in pages 7-10 of Remarks, Examiner would indicate that applicant's arguments are arguments against the references individually, where one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Moreover, Examiner would point out that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In particular, it was well known in the art of air freshening/deodorizing devices/methods that the air treatment agent is released based upon one or more criterion such as concentration/presence of an airborne agent and presence of a person. Thus, it would have been obvious to one skilled in this art to incorporate the two detection devices/methods into a single device in order to emit the air treatment agent when upon detection of both the airborne agent and a person in the vicinity of the device so as to ensure that the air treatment occurs

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only when a person is present in an area contaminated by an airborne agent to more efficiently and economically treat the air.

In addition, as to Applicant's argument in regards to the processor unit in p. 8 of Remarks and in the first full paragraph on p. 10 of Remarks, Examiner would maintain that the processor unit of JP 370 as well as that of Kvietok and Barradas is fully capable of allowing airborne treatment agent to be expelled in response to a signal from one or more of the airborne agent sensor, only when the person detector gives a signal and for an interval thereof. Furthermore, Examiner would indicate that this line of arguments is directed toward a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REGINA YOO whose telephone number is (571)272-6690. The examiner can normally be reached on Monday-Friday, 10:00 am - 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth L McKane/
Primary Examiner, Art Unit 1797

RY